

by Sedgwick* for the other Australian species. The feet closely agree with those of *P. novæ-zealandiæ*, as figured by Sedgwick (*loc. cit.*), being provided with a dorso-median papilla above the claws and a lateral one on each side.

Jaws.—The outer blade of the jaw is simple, as in *P. novæ-zealandiæ*, and not provided with an accessory tooth as in *P. Leuckartii*.

Genital Aperture.—The genital aperture is situated between the legs of the last pair. In some specimens it is a very prominent white papilla; these are probably females. The other specimens, in which it is less prominent, may be young females or males, but I have found no white papilla on the base of the last leg, such as exists in the males of *P. Leuckartii*.

Habitat.—Macedon, Victoria. In and upon rotten wood.

On the Compound Eyes of Arthropods.

'Studies from the Biological Laboratory of Johns Hopkins University,' vol. iv. no. 6, contains a paper "On the Morphology of the Compound Eyes of Arthropods," by Mr. Sho Watase, which is of interest owing to its bearing on the origin of the compound eyes of insects.

The principal subject of the paper is the eye of *Limulus*; but types of the three great groups of Arthropods—Insecta, Crustacea, and Arachnids—were studied, and the results are included in the generalizations at the close of the paper.

The primitive type of the *ommatidium*, or visual unit, is traced into a simple open ectodermic pit, from which he believes the compound eyes of Arthropods to have developed by a vegetative repetition of similar structures, not unlike what is supposed to have taken place in the formation of certain compound organs in other animals, such as the kidney in Vertebrates or the respiratory organs in Lamellibranchs.

Taking the number of facets as given by Lubbock, the compound eye of the house-fly (*Musca*) would represent about 4000 invaginations of the skin, and of the dragon-fly (*Æschna*) about 20,000, while an ocellus would represent a single pit.

In an appendix the compound eye of the starfish is briefly considered, and is found to be morphologically strikingly similar to that of an Arthropod. Six lithographic plates accompany the paper and admirably illustrate the author's studies.—*Insect Life*, vol. ii. no. 10, April 1890, p. 293.

* "Monograph of the Species and Distribution of the Genus *Peripatus* (Gülding)," Quarterly Journal of Microscopical Science, April 1888.